

Serial No. 10/054,174
Shirley et al.
Case No. CE08633R

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REMARKS

Reconsideration of the above-referenced application is respectively requested in view of the above amendments and these remarks. Claims 1-21 are currently pending.

In the Office Action, claims 16 and 18 were objected to as containing certain informalities. Applicants have amended claims 16 and 18 to include the omitted word "of" as suggested by the Examiner.

In the Office Action, claims 1, 2, 6, 10-13, and 15-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 5,410,703 to Nilsson et al. in view of Applicants admitted prior art as specified in the Application. Applicant has amended independent claims 1, 6, 10 and 16 to further define the claimed present invention and to overcome the rejection. The present invention is related to an apparatus and method of effectively updated software from a first version to a second version for logically de-centralized functions. In a further embodiment, the present invention extends to the use of global services. For the present invention, a plurality of devices is provided where each device includes a processor and a memory. In order to operate in a de-centralized manner, the devices are connected by a known method, including an intranet, so that a device can access functions that are contained within any of the plurality of devices. Referring to amended claim 1, where similar amendments are made to claims 6, 10 and 15 such that the following remarks apply to those independent claims, the present invention includes a first set instructions that cause the processor to perform one of the de-centralized processing functions and a second set of instructions that cause the processor to request the performance of a selected one of the first set of instructions. As seen in the Figures of the Application, the first set of instructions is the components of the local services and the second set of instructions are the clients.

The present invention, as claimed, also includes a third set of instructions that cause the processor to bind the second set of instructions to the first set of instructions. As seen in the Figures, the third set of instructions is the name service or its equivalent. When the processor needs to perform a function, the third set of instructions notifies the second set of instructions which of the first set of instructions, which may be on any of the devices, to use to operate. During the software conversion process, the device needs

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to operate on the proper version of software. For operations not to be disrupted, all the devices are not converted from one software version to another software version at the same time. But because the versions are not changed on all the devices at the same time, there are times when the software version on one device is different from the software version on a different device. As the software versions are changed on the devices, different subsets of devices within the communications network are created and a device in one subset may not be able to use the first set of instructions on device that is not in that subset.

The third set of instructions knows which version of software is operating on each device to which it has access. Thus, the third set of instructions cause the processors within the first subset of the devices to have the second set of instructions connect to the first set of instructions in the first subset of devices. Moreover, the third set of instructions cause the processors not within the first subset of devices to have the second set of instructions connect to the first set of instructions not in the first subset of devices. In the words of the Specification, the subsets of devices are the domains in which the decentralized functions are configured.

For the present invention to operate, the third set of instructions knows what version of software is running on each device. In order for that to occur, the third set of instructions needs to be updated along with software versions during software installations. Applicants' have amended the independent claims to clarify this feature of the present invention. Accordingly, when a software version is updated, the third set of instructions is updated on each of the devices. In this way, each device is instructed on which set of first set of instructions the second set of instructions can use. Thus, in the first subset of devices, when a request for a first set of instructions is made, the third set of instructions knows which first set of instructions are available within the first subset and what is not available in that subset.

While software is being updated on one or more of the devices, the update affects more than just the device upon which it is updated. In the de-centralized environment of the present invention, software that resides on one device may be accessed by another device. If the software in one device is updated, that software may not be compatible with the software on another device. Thus, all the devices need to know what software is

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on each device so that a request from one device does not acquire software that resides on another device that is not compatible with requesting device. In order to achieve this result, when any software installation is made the third set of instructions for each of the devices is updated. Accordingly, each device is made aware of what software is available for it on another device. Independent claims 1, 5, 10 and 16 have been amended to reflect the need for the third set of instructions to be update upon each change of software version.

In the Office Action, Nilsson is cited for disclosing, the memory the processor and the first, second and third set of instructions where the third set of instructions is used to connect the second set of instructions to the first set of instructions. Nilsson is also cited for the principle that during software replacement the first and second set of instructions are formed into subsets that are using the same version of software such that the third set of instructions causes the first subset of devices to use the first and second set of instructions of the first software version and the set of devices not in the first subset to use the first and second set of instructions of the second software version. It is respectfully submitted that neither Nilsson nor the admitted prior art discuss how the third set of instructions is updated with the versions of software with each software replacement. Nilsson and the admitted prior art also do not disclose that each version of the third set of instructions that is used by each device in the de-centralized arrangement is to be updated.

The purpose of the invention disclosed by Nilsson is to provide a method and apparatus to converting software from test software to final operating software when test software is tested in a live environment. In such an environment, there two software versions are operating simultaneously on the same devices. Test traffic is operating to the testing software and normal traffic is operating on the final and proven software. Once the test software, or a portion thereof, has completed testing it becomes the software used by the normal traffic and the old software is transitioned out. Because Nilsson is concerned with the transfer from test software to running software fully running on the system, it looks primarily to distinctions between the traffic to determine which version of software to use. The transition from test software to normal software is handled once the test software is proven.

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While Nilsson is directed to issues related to conversions of software, there the similarities between it as well as the art cited in the Office Action and the present invention end. Nilsson does not discuss the issues present in a de-centralized environment that is being addressed by the present invention. Moreover, Nilsson does not discuss the issues that are addressed by the present invention that occur as software is updated across a plurality of devices where one device may need to acquire and use software that resides on a different device. In order to overcome the issues in the prior art, the present invention includes updated the third set of instructions or the instructions that connect the device to the appropriate software across the plurality of devices so that each device knows the subset of devices that has the version of software that is accessible by that device. That version of software may be available on the specific device or on another device within the subset. In order for continued proper operation, the third set of instruction is updated each time the software is updated on any device.

These features are not taught, disclosed or otherwise suggested by Nilsson. These features are also not taught, disclosed or otherwise suggested in the concept of split conversion or rolling conversion as described in the Application. In view of the foregoing it is respectfully submitted that amended independent claims 1, 6, 10, and 16 are not obvious over Nilsson in view of the admitted prior art. As claims 2, 7, 12-13, 15 and 17-18 depend upon independent claims 1, 6, 10 and 16 and include all the limitation so the independent claims, it is respectfully submitted that they are also not obvious over Nilsson in view of the admitted prior art. Applicants therefore respectfully request that the rejection under Section 103(a) be withdrawn.

In the Office Action, claims 3, 4, 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nilsson in view of the prior art cited in the Application and further in view of United States Patent No. 6,186,734 to Saboff et al. As stated above, Applicants have amended independent claims 1 and 6 upon which claims 3 and 4 and 8 and 9 depend, respectfully to overcome the rejection based on Nilsson and the cited prior art. Applicants have also amended claim 3 to be consistent with claim 1 and to include the third version of software that is a limitation of claim 3.

The Office Action cites Saboff for disclosing a third software version for claim 3 and a registry database for managing more than one version of the software on the same

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system as in claims 4, 8 and 9. The present invention is directed to updating software versions with de-centralized functions. To overcome the issues presented by the prior art, the present invention updates the third set of instructions or other means such that each device within the de-centralized environment knows the software versions of the devices so that it can use the software that has the proper version for that device. Assuming the Saboff does disclose the items cited in the Office Action, Saboff, like Nilsson, does not teach, disclose or suggest updating the third set of instructions over a number of de-centralized devices upon each installation of software. Accordingly, it is respectfully submitted that claims 3, 4, 8 and 9 are not obvious over Nilsson in view of the admitted prior art and further in view of Saboff. Applicants therefore respectfully request that this rejection under Section 103(a) be withdrawn.

The Office Action also rejects claims 5, 14, and 19-21 under 35 U.S.C. § 103(a) as being unpatentable over Nilsson in view of the admitted prior art and further in view of Saboff and further in view of obviousness. In particular, the Office Action cites Saboff for the concept of the registry in claims 5 and the "name service" of claims 20 and 21. With respect to claim 19, the Office Action combines the rejection to claims 4, 8 and 16. As stated above, Saboff does not teach, disclose or suggest updating the third set of instructions over a number of de-centralized devices upon each installation of software. Moreover, there is nothing "obvious" about the invention as claimed. Accordingly, it is respectfully submitted that claims 5, 14, and 19-21 are not obvious over Nilsson in view of the admitted prior art and further in view of Saboff. Applicants' therefore respectfully request that this rejection under Section 103(a) be withdrawn.

As the Applicants have overcome all substantive rejections and objections given by the Examiner and have complied with all requests properly presented by the Examiner, the Applicants contend that this Amendment, with the above discussion, overcomes the Examiner's objections to and rejections of the pending claims. Therefore, the Applicants respectfully solicit allowance of the application. If the Examiner is of the opinion that any issues regarding the status of the claims remain after this response, the Examiner is invited to contact the undersigned representative to expedite resolution of the matter.

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Please charge any fees associated herewith, including extension of time fees, to
50-2117.

Respectfully submitted,
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